

which it stuck by the root F, at the end of which small Stem was fastened-on a Hemisphere, or half a hollow Ball, with the mouth of it open from the stemwards, so that it looked much like a Funnel, or an old fashioned Bowl without a foot. This night, making many tryals and observations of this Experiment, I met, among a multitude of the Globular ones which I had observed, a couple of Instances, which are very remarkable to the confirmation of my Hypothesis.

And the First was of a pretty big Ball fastened on to the end of a small sliver of Iron, which *Compositum* seemed to be nothing else but a long thin chip of Iron, one of whose ends was melted into a small round Globule; the other end remaining unmelted and irregular, and perfectly Iron.

The Second Instance was not less remarkable then the First; for I found, when a Spark went out, nothing but a very small thin long sliver of Iron or Steel, unmelted at either end. So that it seems, that some of these Sparks are the slivers or chips of the Iron vitrified, Others are only the slivers melted into Balls without vitrification, And the third kind are only small slivers of the Iron, made red-hot with the violence of the stroke given on the Steel by the Flint.

He that shall diligently examine the Phenomena of this Experiment, will, I doubt not, find cause to believe, that the reason I have heretofore given of it, is the true and genuine cause of it, namely, That the spark appearing so bright in the falling, is nothing else but a small piece of the Steel or Flint, but most commonly of the Steel, which by the violence of the stroke is at the same time sever'd and heat red-hot, and that sometimes to such a degree, as to make it melt together into a small Globule of Steel; and sometimes also is that heat so very intense, as further to melt it and vitrify it; but many times the heat is so gentle, as to be able to make the sliver only red hot, which notwithstanding falling upon the tinder (that is only a very curious small Coal made of the small threads of Linnen burnt to coals and char'd) it easily sets it on fire. Nor will any part of this Hypothesis seem strange to him that considers, First, that either hammering, or filing, or otherwise violently rubbing of Steel, will presently make it so hot as to be able to burn ones fingers. Next, that the whole force of the stroke is exerted upon that small part where the Flint and Steel first touch: For the Bodies being each of them so very hard, the puls cannot be far communicated, that is, the parts of each can yield but very little, and therefore the violence of the concussion will be exerted on that piece of Steel which is cut off by the Flint. Thirdly, that the filings or small parts of Steel are very apt, as it were, to take fire, and are presently red hot, that is, there seems to be a very combustible sulphureous Body in Iron or Steel, which the Air very readily preys upon, as soon as the body is a little violently heated.

And this is obvious in the filings of Steel or Iron cast through the flame of a Candle; for even by that sudden transitus of the small chips of Iron, they are heat red hot, and that combustible sulphureous Body is presently prey'd upon and devoured by the aerial incompassing Menstruum, whose office in this Particular I have shewn in the Explication of Char-

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